

Notice of Allowability

Application No.

10/626,940

Examiner

Kamran Afshar, 571-272-7796

Applicant(s)

REDDY, GAUTAM G.

Art Unit

2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/8/2006.
2. ☒ The allowed claim(s) is/are 9-15, 18-24, 27-34 and 37-44.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Michael L. Berman, Reg. No: 51464 on 2/7/2006.

The application has been amended as follows:

In The Claim(s):

1-8. (Cancelled)

9. (Currently amended) System for handover of a mobile wireless transmit/receive unit (WTRU) between a cellular network and a wireless local area network (WLAN) comprising:

means a network communication device in a cellular network for communicating between a WLAN and [a] the cellular network;

means a cellular network communication device in a mobile unit for communicating between the mobile unit and the cellular network;

means a WLAN communication device in the mobile unit for communicating between the mobile unit and the WLAN;

means a WTRU location device in the cellular network for determining the location of the mobile unit;

means a WLAN location device in the cellular network for determining the coverage area of the WLAN;

a correlation device in the cellular network for correlating the location of the mobile unit with the coverage area of the WLAN;

means an informing device in the cellular network for sending a message to the mobile unit informing the mobile unit of the existence of the WLAN when the mobile unit approaches the coverage area of the WLAN prior to handover;

a selection device in the mobile unit to provide user selection of the WLAN in response to the message indicating the availability of WLAN coverage, whereby the WTRU is configured to pre-select acceptance of communication through the WLAN; and

Art Unit: 2681

~~means a handoff device in the mobile unit~~ for handing over the mobile unit between the cellular network and the WLAN when the mobile unit is in the corresponding coverage area.

10. (Currently amended) The system of claim 9 wherein the ~~means for handing over~~ handoff device provides a handoff from the cellular network to the WLAN when the mobile unit is in the coverage area of the WLAN.

11. (Currently amended) The system of claim 9 wherein the ~~means for handing over the mobile unit between the cellular network and the WLAN~~ handoff device provides a handoff from the WLAN to the cellular network when the determined location of the mobile unit indicates the mobile unit leaving the coverage area of the WLAN.

12. (currently amended) The system of claim 9 further comprising ~~means a WLAN data information device in the cellular network to provide data further information to the WTRU concerning to indicate the availability of WLAN coverage and at least one further aspect of the WLAN coverage.~~

13. (Currently amended) The system of claim 12 wherein the ~~claim 9~~ further comprising ~~means a WLAN data device to provide data to the WTRU to indicate the availability of WLAN coverage and further information concerning the WLAN coverage, the further information comprising comprises at least one of cost, speed of the network WLAN, and user services offered by the WLAN.~~

14. (Currently amended) The system of claim 13 further comprising ~~means an acceptance device to provide user acceptance of communication through the WLAN in response to the data indicating the availability of WLAN coverage and the further information.~~

15. (Currently amended) The system of claim 9 further comprising:
~~means a WLAN data device to provide data to the WTRU to indicate the availability of WLAN coverage and further information concerning the WLAN coverage, the further information comprising at least one of cost, speed of the network WLAN, and user services offered by the WLAN; and~~

~~means a selection device to provide user selection of the WLAN in response to the data indicating the availability of WLAN coverage and the further information, wherein the user may pre-select acceptance of communication through the WLAN according to the further information, prior to handover. the receipt by the WTRU of the further information.~~

Art Unit: 2681

16. (Cancelled)

17. (Cancelled)

18. (Currently amended) A wireless transmit and receive unit (WTRU) comprising:
a cellular network communication device for communicating with a cellular network and
receiving ~~information~~ a message from the cellular network prior to handover indicating the
availability of a wireless local area network (WLAN) having a coverage area at a geolocation of
the WTRU;

a handoff acceptance device for accepting a handing over of the WTRU from the cellular
network to the ~~local network~~ WLAN after receiving the ~~local network~~ WLAN indicator information;
and

a ~~local network~~ WLAN communication device for communicating with the ~~local network~~
WLAN; ~~after the WTRU is handed over to the local network~~ WLAN;

a selection device for providing user selection of the WLAN in response to the message
indicating the availability of WLAN coverage, whereby the WTRU is configured to pre-select
acceptance of handover; and

the handoff accepting device for handing over the WTRU between the cellular network
and the WLAN when the WTRU is in the corresponding coverage area.

19. (Currently amended) The WTRU of claim 18 wherein the handoff ~~acceptance~~
~~device responds to a handoff~~ is from the cellular network to the WLAN when the WTRU has a
geolocation in the coverage area of the WLAN.

20. (Currently amended) The WTRU of claim 18 wherein the handoff ~~acceptance~~
~~device responds to a handoff~~ is from the WLAN to the cellular network when the determined
location of the WTRU indicates the WTRU leaving the coverage area of the WLAN.

21. (Currently amended) The WTRU of claim 18 further comprising a circuit to
receive data indicating the availability of WLAN coverage and ~~at least one further aspect of~~
further information concerning the WLAN coverage.

22. (Currently amended) The WTRU of ~~claim 18~~ claim 21 wherein the ~~further~~
~~comprising a circuit to receive data indicating the availability of WLAN coverage and further~~

Art Unit: 2681

information concerning the WLAN coverage, ~~the further information comprising~~ comprises at least one of cost, speed of the network WLAN, and user services offered by the WLAN.

23. (Original) The WTRU of claim 22 further comprising a circuit to provide user acceptance of communication through the WLAN in response to the data indicating the availability of WLAN coverage and the further information.

24. (Currently amended) The WTRU of claim 18 further comprising:
a circuit to receive data indicating the availability of WLAN coverage and further information concerning the WLAN coverage, the further information comprising at least one of cost, speed of the network WLAN, and user services offered by the WLAN; and
a circuit to provide user selection of the WLAN in response to the data indicating the availability of WLAN coverage and the further information, wherein the user may pre-select acceptance of communication through the WLAN according to the further information, prior to handover. ~~the receipt by the WTRU of the further information.~~

25. (Cancelled)

26. (Cancelled)

27. (Currently amended) Method for handover of a mobile wireless transmit/receive unit (WTRU) between a cellular network and a wireless local area network (WLAN) comprising:
establishing communication between the WLAN and a cellular network;
determining in the cellular network the location of the mobile unit;
determining in the cellular network the coverage area of the WLAN;
correlating in the cellular network the location of the mobile unit with the coverage area of the WLAN;
providing user selection of the WLAN in response to a message indicating the availability of WLAN coverage, whereby the WTRU is configured to pre-select acceptance of handover;
sending the message to the mobile unit by the cellular network prior to handover
informing the mobile unit of the existence of the WLAN when the location correlation indicates the mobile unit approaches entering the coverage area of the WLAN; and
handing over the mobile unit between the cellular network and the WLAN when the mobile unit is in the corresponding coverage area.

Art Unit: 2681

28. (Original) The method of claim 27 wherein the handing over provides a handoff from the cellular network to the WLAN when the mobile unit is in the coverage area of the WLAN.

29. (Original) The method of claim 27 wherein the handing over the mobile unit between the cellular network and the WLAN provides a handoff from the WLAN to the cellular network when the determined location of the mobile unit indicates the mobile unit leaving the coverage area of the WLAN.

30. (Currently amended) The method of claim 27 further comprising providing data information to the WTRU to indicate the availability of WLAN coverage and ~~at least one further aspect of~~ further information concerning the WLAN coverage.

31. (Currently amended) The method of claim ~~27~~ 30 ~~further comprising providing data to the WTRU to indicate the availability of WLAN coverage and further information concerning the WLAN coverage, wherein~~ the further information ~~comprising~~ comprises at least one of cost, speed of the network WLAN, and user services offered by the WLAN.

32. (Currently amended) The method of claim 31 further comprising providing user acceptance of communication through the WLAN in response to the data information indicating the availability of WLAN coverage and the further information.

33. (Currently amended) The method of claim 27, further comprising the WLAN interacting with the cellular network to provide the cellular network with data concerning coverage of ~~at least one~~ the WLAN ~~in the core network~~ and services offered by said WLAN to the mobile units.

34. (Currently amended) The method of claim 27 further comprising:
providing data to the WTRU to indicate the availability of WLAN coverage and further information concerning the WLAN coverage, the further information comprising at least one of cost, speed of the network WLAN, and user services offered by the WLAN; and
providing user selection of the WLAN in response to the data indicating the availability of WLAN coverage and the further information, wherein the user may pre-select acceptance of communication through the WLAN according to the further information, prior to handover. ~~the receipt by the WTRU of the further information.~~

35. (Cancelled)

36. (Cancelled)

37. (New) A mobile communications system, in which a core network provides wireless service to a plurality of multi-mode mobile units, and a first local network of a first type provides communication with ones of the mobile units, wherein mobile unit communications are handed over between said first local network and a second local network of a second type with which the mobile units are configured to communicate, the system comprising:

a database, configured to be accessed by the core network, which includes information concerning the first and second local networks and geographic coverage of the first and second local networks; and

a position comparison device, configured to be accessed by the core network, to identify a position of at least one mobile unit and to correlate the geographic coverage of the first and second local networks with the position of said one mobile unit and provide information concerning the correlation to a user of said one mobile unit prior to handover;

a selection device in said one mobile unit to provide user selection of the second local network in response to receiving said information, whereby the mobile unit is configured to pre-select acceptance of communication through the second local network; and

a handover device in said one mobile unit to hand over the mobile unit between the first network and the second network when the mobile unit is in the corresponding coverage area.

38. (New) The mobile communications system of claim 37, wherein the position identification function includes accepting signals from a GPS position locator associated with said one mobile unit.

39. (New) The mobile communications system of claim 37, wherein the position identification function includes using network based location using signal calculations derived from communications with said one mobile unit.

40. (New) The mobile communications system of claim 37, wherein the position identification function includes at least one of angle of arrival (AOA), time difference of arrival (TDOA) and GPS.

41. (New) The mobile communications system of claim 37, wherein the position identification function is provided by a hybrid system using GPS position locator associated with said one mobile unit, and network based location.

42. (New) The mobile communications system of claim 37, wherein one of the local networks is a digital cellular communications network and the other local network is a WLAN.

43. (New) The mobile communications system of claim 37, wherein each local network interacts with the core network to provide the core network with information concerning the service area coverage of that local network and further information concerning that local network comprising at least one of cost, speed of that local network, and user services offered by that local network to the mobile units; and

in addition to the information concerning the correlation of the geographic coverage of the first and second local networks with the position of said one mobile unit, the further information concerning at least one of the first and second local networks is provided to the user of the one mobile unit prior to handover.

44. (New) The mobile communications system of claim 42, wherein each local network interacts with the core network to provide the position of the mobile unit when served by that local network.

Allowable Subject Matter

2. In view of the Amended claim as discussed above in item 1, Claims 9-15, 18-24, 27-34 and 37-44 are allowed.

The following is an examiner's statement of reasons for allowance: 9-15, 18-24, 27-34 and 37-44.

With respect to claim 9, the prior art of record fails to disclose singly or in combination or render obvious that a correlation device in the cellular network for correlating the location of the mobile unit with the coverage area of the WLAN; an informing device in the cellular network for sending a message to the mobile unit informing the mobile unit of the existence of the WLAN when the mobile unit approaches the coverage area of the WLAN prior to handover; a selection device in the mobile unit to provide user selection of the WLAN in response to the message indicating the availability of WLAN coverage, whereby the WTRU is configured to pre-select acceptance of communication through the WLAN; and a handoff device in the mobile unit for handing over the mobile unit between the cellular network and the WLAN when the mobile unit is in the corresponding coverage area.

With respect to claim 18, the prior art of record fails to disclose singly or in combination or render obvious that a handoff acceptance device for accepting a handing over of the WTRU from the cellular network to the WLAN after receiving the WLAN indicator information; a WLAN communication device for communicating with the WLAN; a selection device for providing user selection of the WLAN in response to the message indicating the availability of WLAN coverage, whereby the WTRU is configured to pre-select acceptance of handover; and the handoff accepting device for handing over the WTRU between the cellular network and the WLAN when the WTRU is in the corresponding coverage area.

With respect to claim 27, the prior art of record fails to disclose singly or in combination or render obvious that the method correlating in the cellular network the location of the mobile unit with the coverage area of the WLAN; providing user selection of the WLAN in response to a message indicating the availability of WLAN coverage, whereby the WTRU is configured to pre-select acceptance of handover; sending the message to the mobile unit by the cellular network prior to handover informing the mobile unit of the existence of the WLAN when the location correlation indicates the mobile unit entering the coverage area of the WLAN; and handing over the mobile unit between the cellular network and the WLAN when the mobile unit is in the corresponding coverage area.

With respect to claim 37, the prior art of record fails to disclose singly or in combination or render obvious that the system comprising a position comparison device, configured to be accessed by the core network, to identify a position of at least one mobile unit and to correlate the geographic coverage of the first and second local networks with the position of the one mobile unit and provide information concerning the correlation to a user of the one mobile unit prior to handover; a selection device in the one mobile unit to provide user selection of the second local network in response to receiving the information, whereby the mobile unit is configured to pre-select acceptance of communication through the second local network; and a handover device in the one mobile unit to hand over the mobile unit between the first network and the second network when the mobile unit is in the corresponding coverage area.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2681

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Buckley (U.S. Pub. No.: 2005/0094593 A1).

b) Watanabe (U.S. Pub. No.: 2005/0239443 A1).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (571) 272-7796. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, Feild, Joseph can be reached @ (571) 272-4090. The fax number for the organization where this application or proceeding is assigned is **571-273-8300** for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kamran Afshar


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER